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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/663,416	09/16/2003	Bruce B. Randolph		2714

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RICHMOND, HITCHCOCK, FISH & DOLLAR
P.O. Box 2443
Bartlesville, OK 74005

EXAMINER

BROWN, JENNINE M

ART UNIT	PAPER NUMBER
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1755

DATE MAILED: 09/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/663,416

Applicant(s)

RANDOLPH ET AL.

Examiner

Jennine M. Brown

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) 10-29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 09/16/2003 is in compliance with the provisions of 37 CFR 1.97 and has been considered by the examiner:

Claim Objections

Claim 5 is objected to because of the following informalities: in the section where "the anion is selected from a group consisting of halides of", it is unclear whether the Group IIIA metals being claimed are the equivalent of Group 3 or 13 using the new numbering system of the Periodic Table of the elements. Applicants have not clarified whether the Grouping used is under the old system or the CAS system. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2-3 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Applicants state that R is a group IA element which includes hydrogen but R is the terminal group before chain propagation and if it is a polyacrylate it cannot be hydrogen because it would be a monomeric acid and not a polymeric ester group according to the formula given in claim 1.

Claim Rejections - 35 USC § 102/Claim Rejections - 35 USC § 103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

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the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Aumuller, et al. (US 5714611).

Aumuller, et al. disclose an acid catalyst composition comprised of methanesulfonic acid, trifluoromethanesulfonic acid, benzenesulfonic acid, p-toluene sulfonic acid, mineral acids (Bronsted Acid), or carboxylic acids, heavy metal catalysts (Lewis acid) and organic catalysts such as phosphonium compounds or quaternized hetero ammonium compounds with anhydrous halides (used to make ionic liquid), used in an amount from 0.01 to 25 mole percent and are used to stabilize alkyl acrylate copolymers, alkyl methacrylate copolymers and other polymers (col. 6, l. 1 – col. 7, l. 54; col. 8, l. 56 – col. 9, l. 17).

Claims 1-9 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Aumuller (US 5914360).

Aumuller discloses an acid catalyst composition comprised of methanesulfonic acid, trifluoromethanesulfonic acid, benzenesulfonic acid, p-toluene sulfonic acid, mineral acids (Bronsted Acid), or carboxylic acids, heavy metal catalysts (Lewis acid) and organic catalysts such as phosphonium compounds or quaternized hetero ammonium compounds with anhydrous halides (used to make ionic liquid), used in an amount from 0.01 to 25 mole percent and are used to stabilize alkyl acrylate copolymers, alkyl methacrylate copolymers and other polymers (col. 6, l. 1 – col. 7, l. 54; col. 8, l. 56 – col. 9, l. 17). The specification discloses that increasing the amount of catalyst above 25 mole percent has no adverse effect on the reaction but offers no further advantages (col. 6, l. 20-26). The prior art appears to anticipate the invention as claimed on the basis of inherent property characteristics but alternatively would be considered obvious because molar ratios above 25% were disclosed and although specific mole percentages were not given, it would have been obvious to one of ordinary skill in the art to use incremental molar percentage increases to 100% in order to determine whether any substantial increase in catalytic activity or specificity were seen.

Claims 1 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Hlatky (WO 01/81436 A1).

Hlatky discloses a process (p. 4, l. 1-3) for the polymerization of one or more olefins (p. 7, l. 20-29) in the presence of a single site catalyst (Ziegler-Natta), optional

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activator (methaluminoxane, boranes) and an ionic liquid (Lewis acid and halide - p. 6, l. 3 – p. 7, l. 16). Ethylene polymerization examples are given (p. 10, l. 1-26).

Response to Arguments

Applicant's arguments filed 6/22/2005 have been fully considered but they are not persuasive.

1. Aumuller (US 5714611)

Applicant argues that they have not found a composition comprising both an acid component and a polymer. Examiner notes applicant's argumentation but again points applicant to column 6, wherein "acidic catalysts, for example sulfonic acids, such as methanesulfonic acid, trifluoromethanesulfonic acid, benzene sulfonic acid or p-toluene sulfonic acid" are disclosed as well as "mineral acids (inorganic acids), such as sulfuric acid, hydrochloric acid or phosphoric acid" and "carboxylic acids" (col. 6, l. 9-20). The composition is disclosed as a stabilizer for polymers and give specific examples of each of the polymers which it may stabilize (col. 8, l. 56-col. 9, l. 17). The claimed composition does not require that the composition be a catalyst composition or that the catalyst composition must comprise a polymer. As Aumuller discloses a composition which comprises an acid component and a polymer, it meets the limitation as claimed and therefore the rejection has been maintained.

2. Aumuller (US 5914360)

Applicant argues that they have not found a composition comprising both an acid component and a polymer. Examiner notes applicant's argumentation but again points

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applicant to column 6, wherein "acidic catalysts, for example sulfonic acids, such as methanesulfonic acid, trifluoromethanesulfonic acid, benzene sulfonic acid or p-toluene sulfonic acid" are disclosed as well as "mineral acids (inorganic acids), such as sulfuric acid, hydrochloric acid or phosphoric acid" and "carboxylic acids" (col. 6, l. 27-32) and ionic catalysts (col. 6, l. 43-61). The composition is disclosed as a stabilizer for polymers and give specific examples of each of the polymers which it may stabilize (col. 9, l. 7-35). The claimed composition does not require that the composition be a catalyst composition or that the catalyst composition must comprise a polymer. As Aumuller discloses a composition which comprises an acid component and a polymer, it meets the limitation as claimed and therefore the rejection has been maintained.

3. Hlatky (US WO 01/81436 A1)

Again applicant argues that they have not found a composition comprising both an acid component and a polymer. Examiner notes applicant's argumentation but again points applicant to page 4 wherein the specification states, "the process of the invention comprises polymerizing one or more olefins in the presence of a single site catalyst, an optional activator and an ionic liquid" and further defines which olefins are used (p. 7, l. 20-29) in the presence of an ionic liquid (Lewis acid and halide – p. 6, l.3-p. 7, l. 16). Even though Hlatky has more ingredients than the primary claim of applicant's invention the language is open and incorporates all of the elements required by applicant's primary claim, the ionic liquid and polymer (polyethylene – p. 10, l. 1-26). As Hlatky

discloses a composition which comprises an acid component and a polymer, it meets the limitation as claimed and therefore the rejection has been maintained.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennine M. Brown whose telephone number is (571) 272-1364. The examiner can normally be reached on M-R 9:30 AM - 7:30 PM; Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on (571) 272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

jmb


J.A. LORENZO
SUPERVISORY PATENT EXAMINER